

ml



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,881	08/06/2003	William Daniel Willey	14412	7532
293	7590	12/12/2006	EXAMINER	
Ralph A. Dowell of DOWELL & DOWELL P.C. 2111 Eisenhower Ave Suite 406 Alexandria, VA 22314			NGUYEN, LEE	
			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/634,881

**Applicant(s)**

WILLEY ET AL.

**Examiner**

LEE NGUYEN

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Invention I in the reply filed on 9/25/06 is acknowledged. The traversal is on the ground(s) that the examiners characterization of inventions I and II share similar language and therefore support the proposition that the field of search would not be different as between the two inventions. This is found persuasive and the restriction requirement is withdrawn.

### ***Information Disclosure Statement***

The IDS filed 12/16/03 has been considered and recorded in the file.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8, 12-15 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 12 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: There are no steps in the claims.

Dependent claims 2-8, 13-15 are rejected for the same reason as set forth above.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-2 and 7-15 are rejected under 35 U.S.C. 102(a) as being anticipated by Venkatraman et al. (IEEE, vol. 3, September 28, 2000, pages 1268-1273) submitted by Applicant.

Regarding claim 1, Venkatraman teaches a method of distributing certificates to mobile devices by establishing a mobile ad hoc network (MANET) between a plurality of mobile devices at a predetermined time and distributing a certificate through said mobile ad hoc network to a respective one of said mobile devices (see p. 1269, first column, second paragraph, and p. 1271, second column, first paragraph).

Regarding claim 2, Venkatraman also teaches that the times for which a certificate is valid is correlated to the said predetermined time for establishing said MANET (p. 1271, first column, last paragraph).

Regarding claim 7, Venkatraman also teaches that the predetermined time for establishing the MANET is determined dynamically based upon measurements of times at which mobile devices encounter each other (p. 1271, first column, last paragraph).

Regarding claim 8, Venkatraman also teaches that the information in said distributed certificate comprises a subset of the full certificate information and the subset includes changed timing information and a signature (p. 1271, first column, last paragraph).

Regarding claim 9, Venkatraman teaches a method of distributing certificates in a mobile ad-hoc network having an access point CH1 (fig. 1) to provide a connection to a communication network (fig. 1) and a plurality of mobile devices A, B to be connected to said communication network (fig. 1) through said access point CH1, said method comprising the steps of retrieving and storing at said access point certificates associated with respective ones of said devices and forwarding said certificates through said mobile ad-hoc network to said respective device (p. 1271, first column, third paragraph).

Regarding claim 10, Venkatraman also teaches that said access point queries devices with which it can exchange packets to determine their embedded root key (p. 1270, second column, third paragraph, see challenge).

Regarding claim 11, Venkatraman further teaches that wherein the access point fetches certificates based upon said embedded root keys (p. 1270, second column, third paragraph, see challenge).

Regarding claim 12, Venkatraman teaches a method of distributing certificates within a mobile ad-hoc network wherein an online entity associated with a device is responsible for both distributing the device's certificate and for fetching other certificates needed to allow validation by another device in said network (p. 1271, first column, third paragraph).

Regarding claim 13, Venkatraman also teaches that said device is responsible for collecting embedded root keys of other devices with which it comes in contact with (p. 1271, first column, third paragraph).

Regarding claim 14, Venkatraman also teaches that said root keys are reported to the online entity (p. 1270, second column, third paragraph).

Regarding claim 15, Venkatraman also teaches that said online entity returns other certificates to the device based upon the reported root keys (p. 1270, second column, third paragraph).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venkatraman in view of Zhou et al. (IEEE November/December 1999).

Regarding claim 3, Venkatraman fails to teach that a device that is unable to retrieve its certificate within a preset time after the establishment of a MANET subsequently attempts to participate in ad-hoc networks prior to the next predetermined time to retrieve its certificate. Zhou teaches that a device that is unable to retrieve its certificate

within a preset time after the establishment of a MANET subsequently attempts to participate in ad-hoc networks prior to the next predetermined time to retrieve its certificate (p. 26, second column, second paragraph). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Zhou with Venkatraman in order to reduce the chance of a successful brute force attack on its private key.

Regarding claims 5-6, Venkatraman fails to teach that an entity tracks which mobile devices have received currently valid certificates and that a certificate of a device which has not received an up-to-date certificate is distributed to another device that communicates with said entity. Zhou teaches that the service is always able to process query and update request from clients. Every query always returns the last updated public key associated with the request client, assuming no concurrent updates on this entry (p. 26, second column, Robustness paragraph). This means that an entity tracks which mobile devices have received currently valid certificates and that a certificate of a device which has not received an up-to-date certificate is distributed to another device that communicates with said entity. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Zhou with Venkatraman in order to provide a robust service.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Venkatraman in



view of Lemilainen et al. (US 6,766,160)

Regarding claim 4, Venkatraman fails to teach that a device that is unable to retrieve its certificate within an amount of time after the MANET establishment initiates a cellular packet data call to fetch its certificate. Lemilainen teaches that an encryption key used for authentication can be obtained from short message service from a cellular system and is used for authentication in the Bluetooth system (col. 7, line 61 – col. 8, line 35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Lemilainen with Venkatraman in order to ensure security during authentication.

Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venkatraman.

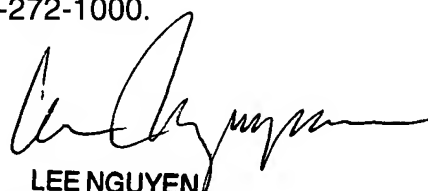
Regarding claims 16-20, the claims are rejected as obvious over Invention I, claims 1-15 as the admission in the election that inventions I and II share similar language.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is 571-272-7854. The examiner can normally be reached on FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDERSON D. MATTHEW can be reached on 571-272-4177. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LEE NGUYEN  
PRIMARY EXAMINER